

REMARKS

The Official Action mailed November 9, 2007, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to March 9, 2008. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on November 14, 2003; April 21, 2004; June 8, 2004; November 10, 2004; March 14, 2005; May 6, 2005; October 20, 2005; February 8, 2006; February 22, 2006; October 11, 2006; October 19, 2006; June 15, 2007; and July 20, 2007.

Further Information Disclosure Statements were filed on November 1, 2007 (received by OIPE on November 5, 2007); and December 11, 2007 (received by OIPE on December 12, 2007). The Applicant respectfully requests that the Examiner provide initialed copies of the Form PTO-1449s evidencing consideration of the above-referenced Information Disclosure Statements.

A further Information Disclosure Statement is submitted herewith and consideration of this Information Disclosure Statement is respectfully requested.

Claims 1-24 are pending in the present application, of which claims 1, 7, 13 and 19 are independent. Claims 7 and 13 have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 2 of the Official Action objects to claim 1 and suggests that "polyamide" be replaced with "polyimide." It is noted that claims 1 and 19 recite "a second insulating film provided over said first insulating film and comprising polyamide to provide a first leveled surface over said first insulating film." These features are supported in the present specification, for example, at page 18, lines 14-19, which discloses the following:

After obtaining the state shown in Fig. 4(A), a silicon nitride film 401 is formed as a first interlayer dielectric film to a thickness of 2000 Å by

plasma CVD. Then, a polyimide resin film 402 is spincoated. Thus, a state shown in Fig. 4(B) is obtained. Polyamide and polyimideamide can be used as resinous materials, as well as polyimide.

Therefore, the present specification supports the recitation of "a second insulating film provided over said first insulating film and comprising polyamide to provide a first leveled surface over said first insulating film" and it is not necessary to amend claim 1 as proposed in the Official Action. Accordingly, reconsideration and withdrawal of the objections are in order and respectfully requested.

Paragraph 3 of the Official Action rejects claims 1, 3-7, 9-13, 15-19 and 21-24 as obvious based on the combination of U.S. Patent No. 5,717,473 to Miyawaki and U.S. Patent No. 5,274,250 to Miyake. With respect to independent claims 1 and 19, the Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness. With respect to independent claims 7 and 13, the Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

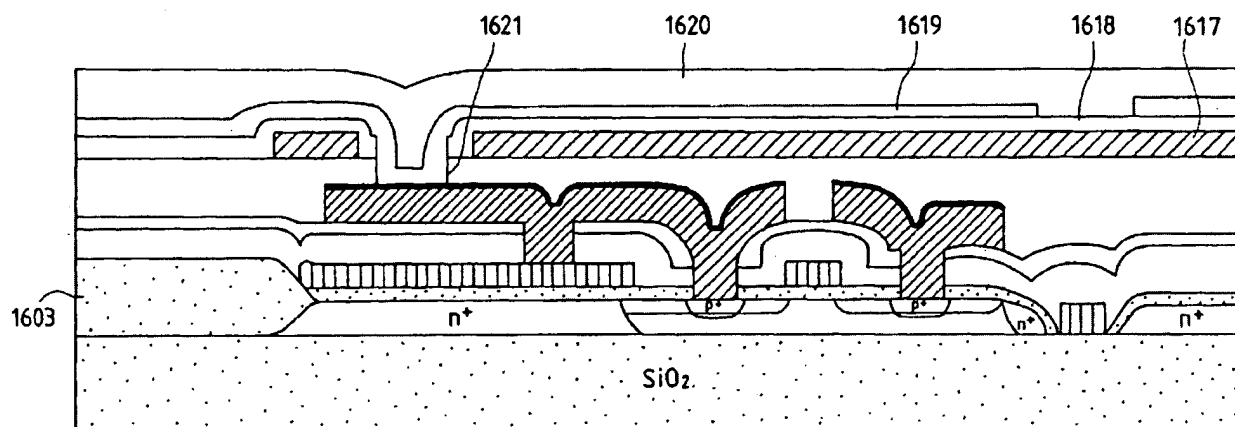
As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See

also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The present invention is generally directed to a semiconductor device. For example, as recited in independent claim 1, the present invention is directed to a semiconductor device comprising a channel region provided over a substrate and between a source region and a drain region; a gate electrode provided over said substrate and provided adjacent to said channel region with a gate insulating film between said gate electrode and said channel region; a first insulating film comprising silicon nitride provided over said channel region and said source region and said drain region and said gate electrode and said gate insulating film; a second insulating film provided over said first insulating film and comprising polyamide to provide a first leveled surface over said first insulating film; a drain electrode connected with said drain region and provided over said second insulating film; a source electrode connected with said source region and provided over said second insulating film; a third insulating film provided over said drain electrode and said source electrode and comprising polyimide to provide a second leveled surface over said drain electrode and said source electrode; a black matrix provided over said third insulating film; a fourth insulating film provided over said black matrix and comprising polyimide to provide a third leveled surface over said black matrix; and a pixel electrode connected with one of said drain electrode and said source electrode and provided over said fourth insulating film.

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 1 and 19 recite a second insulating film comprising polyamide. Independent claims 7 and 13 have been amended to recite that a black matrix is in contact with one of a drain electrode and a source electrode in a region in which the black matrix and a pixel electrode are overlapped with each other. For the reasons provided below, Miyawaki and Miyake, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action asserts that “figures 8A-8J of Miyawaki disclose a semiconductor device comprising: a channel region 3001 provided over a substrate 3 and between a source region and a drain region 1610; a gate electrode 1607 provided over the substrate 3 and provided adjacent to the channel region 3001 with a gate insulating film 1601 between the gate electrode 1607 and the channel region 3001; a first insulating film 1611 ... ; a second insulating film 1612 ... ; a drain electrode 1613 ... ; a source electrode 1613 ... ; a black matrix 1617 ... ; a fourth insulating film 1618 ... ; and a pixel electrode 1619 ...” (pages 2-3, Paper No. 20071101a) (Figure 8J reproduced below).



The Official Action concedes that “[f]igures 8A-8J of Miyawaki [do] not disclose the second insulating film, third insulating film, and fourth insulating film comprising polyimide” (page 3, Id.). The Official Action asserts that “figure 5 of Miyake et al. [discloses] the second insulating film 31, third insulating film 33a, and fourth insulating film 33b comprising polyimide (“polyimide”)” (Id.).

In response, the Applicant has amended independent claims 7 and 13 to recite that a black matrix is in contact with one of a drain electrode and a source electrode in a region in which the black matrix and a pixel electrode are overlapped with each other, which is supported in the present specification, for example, by Figure 4D. The Applicant respectfully submits that the alleged combination of Miyawaki and Miyake,

either alone or in combination, do not teach or suggest the above-referenced features of amended independent claims 7 and 13.


Independent claims 1 and 19 recite a second insulating film comprising polyamide, which is supported in the present specification as noted in detail above. The Applicant respectfully submits that the alleged combination of Miyawaki and Miyake, either alone or in combination, do not teach or suggest the above-referenced features of independent claims 1 and 19.

Since Miyawaki and Miyake do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

The Official Action rejects dependent claims 2, 8, 14 and 20 as obvious based on the combination of Miyawaki, Miyake, and U.S. Patent No. 5,550,070 to Funai. Please incorporate the arguments above with respect to the deficiencies in Miyawaki and Miyake. Funai does not cure the deficiencies in Miyawaki and Miyake. The Official Action relies on Funai to allegedly teach the features of dependent claims 2, 8, 14 and 20. Specifically, the Official Action relies on Funai to allegedly teach "a plurality of radial crystal grains of silicon" (pages 10-11, Paper No. 20071101a). However, Miyawaki, Miyake and Funai, either alone or in combination, do not teach or suggest the following features or that Miyawaki and Miyake should be modified to include any of the following features: a second insulating film comprising polyamide; or that a black matrix is in contact with one of a drain electrode and a source electrode in a region in which the black matrix and a pixel electrode are overlapped with each other. Since Miyawaki, Miyake and Funai do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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